

CLAIMS

What is claimed is:

1. A device comprising:
 - a first electrical unit;
 - a second electrical unit; and
 - a first set of electrical connections extending from the second electrical unit, each of the first set of electrical connections including a distal tip and a base, wherein at least a distal portion of each of the first set of electrical connection narrows towards the distal tip, each of the first set of electrical connections including at least 50% copper.
2. The device of claim 1, wherein the first electrical unit is a substrate and the second electrical unit is a semiconductor die.
3. The device of claim 1, wherein the first electrical unit is a semiconductor die.
4. The device of claim 1, wherein each of the first set of electrical connections includes at least 80% copper.
5. The device of claim 1, wherein each of the first set of electrical connections has a melting point of at least 400 degrees Celsius.
6. The device of claim 1, wherein each of the first set of electrical connections is tapered.
7. The device of claim 1, wherein along a portion of the first set of electrical connections the width increases with the distance from the die.
8. The device of claim 1, wherein each of the first set of electrical connections has a triangular or substantially triangular side cross section.
9. The device of claim 1, wherein each of the first set of electrical connections has a conical or substantially conical shape.
10. The device of claim 1, wherein each of the first set of electrical connections has a pentagonal or substantially pentagonal side cross section.
11. The device of claim 1, wherein each of the first set of electrical connections has a shape of a frustum or has a substantially frustum-like shape.
12. The device of claim 1, comprising a non-conductive material disposed between the first electrical unit and the second electrical unit.

13. The device of claim 1, comprising a first set of electrical connections extending from the first electrical unit and connecting with the second set of connections.

14. A device comprising:

a substrate including substrate electrical connections; and

a semiconductor die including set of die electrical connections, each of the die electrical connections having a first end connection area and a second end connection area, the first end connection area being connected to the semiconductor die, the first end connection area being wider than the second end connection area.

15. The device of claim 14, wherein each of the die electrical connections includes at least 50% copper.

16. The device of claim 14, wherein each of the die electrical connections has a triangular or substantially triangular side cross section.

17. The device of claim 14, wherein each of the die electrical connections has a conical or substantially conical shape.

18. The device of claim 14, comprising a non-conductive material disposed between the semiconductor die and the substrate.

19. A device comprising:

a substrate;

a semiconductor die; and

a set of die electrical connections extending from the semiconductor die, each of the die electrical connections including a distal tip and a base, wherein the distal tip is narrower than a portion closer to the base, wherein each of the die electrical connections includes at least 50% copper.

20. The device of claim 19 wherein each of the die electrical connections includes at least 80% copper.

21. The device of claim 19, wherein each of the die electrical connections has a melting point of at least 400 degrees Celsius.

22. The device of claim 19, wherein each of the die electrical connections is tapered.

23. The device of claim 19, wherein each of the die electrical connections has a triangular or substantially triangular side cross section.

24. The device of claim 19, wherein each of the die electrical connections has the shape of a frustum or has a substantially frustum-like shape.

25. The device of claim 19, comprising a non-conductive material disposed between the semiconductor die and the substrate.

26. The device of claim 19, comprising substrate electrical connections extending from the substrate and connecting with the die electrical connections.

27. A device comprising:

a processor, the processor including:

a substrate;

a semiconductor die; and

a set of electrical connections extending from the semiconductor die, each of the electrical connections including a distal tip and a base, wherein the distal tip is narrower than the base, wherein each of the electrical connections includes at least 50% copper; and

a DRAM.

28. The device of claim 27, wherein each of the electrical connections includes at least 80% copper.

29. The device of claim 27, comprising a non-conductive material disposed between the semiconductor die and the substrate.